



310 NRDeep groove ball bearing with filling slots and snap ring

Deep groove ball bearing with filling slots and snap ring

Single row deep groove ball bearings with filling slots and a snap ring accommodate more balls than standard deep groove ball bearings. They are of a simple, yet versatile, design and are robust in operation, requiring little maintenance. They can accommodate radial and axial loads in both directions. They have a higher radial load carrying capacity than the corresponding bearings without filling slots but have a limited axial load carrying capacity due to the filling slots. The snap ring, fitted in an annular groove in the outer ring, facilitates axial location of the bearings within their housings.

- Snap ring facilitates axial location within housing
- Simple, versatile and robust design
- Accommodate higher radial loads than corresponding bearings without filling slots, with limited axial loads in both directions
- Require little maintenance

Overview

Dimensions

Bore diameter	50 mm
Outside diameter	110 mm
Width	27 mm

Performance

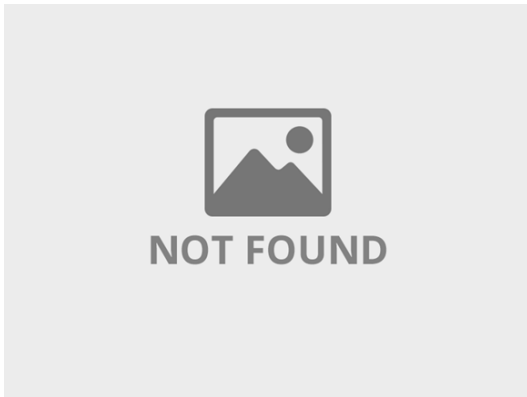
Basic dynamic load rating	64.4 kN
Basic static load rating	52 kN
Reference speed	11 000 r/min
Limiting speed	7 000 r/min

Properties

Filling slots	With
Number of rows	1
Locating feature, bearing outer ring	Snap ring (fitted) mm
Bore type	Cylindrical
Cage	Sheet metal
Matched arrangement	No
Radial internal clearance	CN
Tolerance class	Normal
Material, bearing	Bearing steel
Coating	Without

Sealing	Without
Lubricant	None
Relubrication feature	Without

Technical Specification

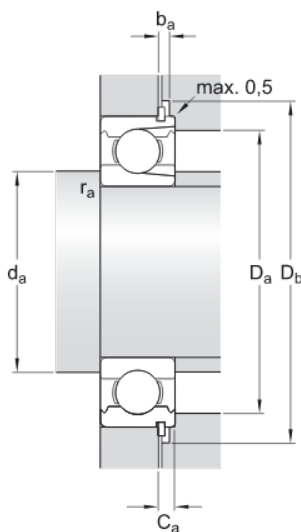


Dimensions

d	50 mm	Bore diameter
D	110 mm	Outside diameter
B	27 mm	Width
d_1	≈ 68.76 mm	Shoulder diameter
D_2	≈ 95.2 mm	Recess diameter
D_3	106.81 mm	Diameter of snap ring groove
D_4	116.6 mm	Outside diameter of snap ring
b	2.7 mm	Width of snap ring groove
C	3.28 mm	Distance from outer ring side face to snap ring groove
f	2.46 mm	Width of snap ring
r_0	max. 0.6 mm	Bottom radius of snap ring groove
$r_{1,2}$	min. 2 mm	Chamfer dimension

Abutment dimensions

d_a	min. 61 mm	Diameter of shaft abutment
D_a	max. 99 mm	Diameter of housing abutment
D_b	min. 118 mm	Diameter of snap ring recess in the housing
b_a	min. 3 mm	Width of snap ring recess in the housing
C_a	max. 5.74 mm	Distance from outer ring side face to snap ring back face
r_a	max. 2 mm	Radius of shaft or housing fillet



Calculation data

Basic dynamic load rating	C	64.4 kN
Basic static load rating	C_0	52 kN
Fatigue load limit	P_u	2.2 kN
Reference speed		11 000 r/min
Limiting speed		7 000 r/min
Minimum load factor	k_r	0.05

Mass

Mass bearing	1.15 kg
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Included products

Snap ring	SP 110
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Tolerance class

Dimensional tolerances	Normal
Radial run-out	Normal

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